

REMARKS

The present response is intended to be fully responsive to all points of objection and rejection raised in the Office Action mailed December 8, 2010, and is believed to place the application in condition for prompt allowance. By this paper, claims 1, 13, 14, 15, 18, 22 and 25 have been amended and claim 28 has been added. Support for the amendments to claim 1 and 25 can be found in original claims 13, 14, and 26. Support for new claim 28 can be found in claim 27. Claims 13, 14, 15, and 18 have been amended for antecedent basis purposes. Claim 22 has been amended to correct a typographical error. Therefore, upon entry of this amendment, claims 1-25 and 27-28 are pending in this application.

Prior Art Claim Rejections

In the Office Action, claims 1-7, 25-27 stand rejected under §102(b) as being anticipated by Mani (U.S. Patent 6,017,433). Further, claims 8-24 are rejected under §103(a) as being unpatentable over Mani and further in view of Gallagher et al. (U.S. Patent 5,736,023).

Currently amended claim 25 discloses a treatment system comprising plurality of electrodialysis units arranged in stages to each receive a feed flow to be treated and a concentrate flow, wherein at least one stage includes one or more filled-cell electrodialysis (EDI) units, and the feed flow proceeds through the stages in an order opposite to that of the concentrate flow; the fluid treatment system further comprising at least one pump operative to control the progress of the feed flow and the concentrate flow through the units, the stages further comprising a detector operative to sense a characteristic of the feed flow and the concentrate flow in the units; the fluid treatment system further comprising a controller responsive to the detector for controlling the at least one pump to effectively match a characteristic of the feed flow and the concentrate flow in the units.

In accordance with MPEP §2131 and recent decisions by the Court of Appeals for the Federal Circuit, to anticipate under §102, the reference must teach “all of the limitations

arranged or combined in the same way as recited in the claim". *Net MoneyIn Inc. v. Verisign Inc.*, 545 F.3d 1359 (Fed. Cir. 2008). "The identical invention must be shown in as complete detail as contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989).

In the Office Action, claim 25 is rejected under §102 as being anticipated by Mani, U.S. Patent 6,017,433.

Figures 8 and 9 in Mani show some process arrangements for producing de-ionized solutions from acidified salt solutions. More particularly, Fig. 8 of Mani shows two EDI cells 230, 232 coupled in series, having an incoming feed stream 234 of a sugar syrup, and an outgoing stream of de-ionized syrup 236. Suitable membranes e.g., 238, 240 separate the cells 230, 232, respectively. The membranes separate the feed streams into the desired feed F and waste W. The waste from cell 230 is sent to a nanofilter 242 via a pipe 244. At 243, the permeate of the waste is sent to a drain or a secondary use. The retentate is recycled to the dextrose isomerization step via pipe 248. The feed from the F side of cell 232 is sent to an ion exchange column 252 via pipe 255. Water is introduced into the waste side of cell 232 via a pipe 254 and forwarded to the waste side W of cell 230 via pipe 256 in order to obtain the concentrated waste. (Col. 19, Lines 38-55).

Further, although Mani discusses electrical conductance, it is discussed with reference to maintaining the conductivity in concentrate tank-1, numeral 186, in a configuration where the feed and concentrate solution flow in the same direction through the electrodeionization cell (Fig. 4; Col. 15, Lines 25-33).

As can be seen, Mani fails to disclose the fluid treatment system further comprising at least one pump operative to control the progress of the feed flow and the concentrate flow through the units, the stages further comprising a detector operative to sense a characteristic of the feed flow and the concentrate flow in the units; the fluid treatment system further comprising a controller responsive to the detector for controlling the at least one pump to effectively match a characteristic of the feed flow and the concentrate flow in the units, the

feed flow proceeds through the stages in an order opposite to that of the concentrate flow, as is required by claim 25 of the current application. Therefore, the §102 rejection of claim 25 is not supported by Mani and should be withdrawn. Claim 1 contains similar limitations to those of claim 25 and is patentable for at least the same reasons.

Further, turning to Gallagher, the reference discloses the use of a sensor (Col. 22, Lines 38-53), valves (Col. 22, Lines 38-53), and a controller (Col. 22, Lines 27-36). However, Gallagher teaches that these components are used to remove particulate fouling from the ion-exchange resin and ion-permeable membranes of the concentrating compartments (Col. 25, Line 58 – Col. 26, Line 4). As can be seen, Gallagher fails to cure the deficiencies of Mani. Accordingly, both Mani and Gallagher fail to disclose the fluid treatment system further comprising at least one pump operative to control the progress of the feed flow and the concentrate flow through the units, the stages further comprising a detector operative to sense a characteristic of the feed flow and the concentrate flow in the units; the fluid treatment system further comprising a controller responsive to the detector for controlling the at least one pump to effectively match a characteristic of the feed flow and the concentrate flow in the units, the feed flow proceeds through the stages in an order opposite to that of the concentrate flow, as is required by claim 25 of the current application. Claim 1 contains similar limitations to those of claim 25 and is patentable for at least the same reasons.

Therefore, favorable consideration of both claims 1 and 25 is respectfully requested. Further, claims 2-7 and 27-28, which depend from one of claims 1 or 25 are patentable for at least the same reasons.

35 U.S.C. §103(a) Art Based Rejection

Therefore, since claims 1 and 25 are in proper form for allowance, favorable consideration of dependent claims 8-24, which depend from one of claims 1 or 25, is respectfully requested.

-12-

Conclusion

In view of the remarks herein, Applicants submit that claims 1-25 and 27-28 are patentably distinguishable from the art applied, and prompt allowance of the application is respectfully requested.

The Examiner is invited to call the undersigned attorney if, during the course of reconsideration of this application, any question or comment should arise.

Respectfully submitted,
WEGMAN, HESSLER & VANDERBURG

By: _____ /cah/
Charles A. Hayes
Reg. No. 60,333

Suite 200
6055 Rockside Woods Boulevard
Cleveland, Ohio 44131
216.642.3342

May 6, 2011